

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A file management method having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to write the data in another write area is carried out, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to write the data in another write area is not carried out, said recording medium storing file type information ~~for discrimination between said first and second processing modes as file management information associated with said file~~, said method includes the steps of:

reading a file type information associated with a file to be processed from the recording medium, the file type information being used for identifying a processing mode between said first processing mode and said second processing mode as file management information associated with said file;

converting said file type information indicative of said first processing mode to a file type information indicative of said second processing mode; and

writing the converted file type information in the recording medium as the file management information associated with said file to be processed.

2. (previously presented) A file management method as set forth in claim 1, wherein said replacement processing is carried out on an ECC block basis, said block including N recording units termed as sectors (N: positive integer), and further comprising steps of:

judging whether or not in all the N sectors of said ECC blocks that store data belonging to the file, are occupied; and

when judging that the data is not stored in the all N sectors of the ECC blocks, registering in said file management information remaining sector in which the data of the file to be processed is not stored as a stuffing.

3. (previously presented) A file management method as set forth in claim 2, further comprising the steps of:

judging whether or not data, termed as other data, belonging to a file, termed as another file, other than said file to be processed is stored in said remaining sector;

when judging that the other data is stored in the remaining sector, moving said other data to another ECC block; and

reflecting a result of said movement in file management information.

4. (previously presented) A file management method as set forth in claim 2, further comprising the steps of:

judging whether or not data belonging to a file other than said file to be processed is stored in said remaining sector;

when judging that the data is stored in said remaining sector, moving the data belonging to said file to be processed to an ECC block different from said ECC block; and

reflecting a result of said movement in the file management information.

5. (original) A file management method as set forth in claim 3, wherein said step of reflecting the result of said movement includes;

deleting first data allocation information indicative of a data storage location on the recording medium prior to said movement in said file management information; and

registering second data allocation information indicative of a data storage location on the recording medium after said movement in said file management information.

6. (previously presented) A file management method as set forth in claim 1, further comprising a step of setting a flag for inhibiting relocation of the file to be processed in said management information.

7. (previously presented) A file management method according to claim 1 comprising the steps of:

reading data stored at another write area by said replacement processing;
and

writing said data in an original recording area where the data would have
been written without said replacement processing wherein said replacement
processing and the reading step and writing step are carried out on a basis of an
ECC block including N recording units (N: positive integer) termed as sectors.

8. (currently amended) A file management method having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to write the data in another write area is carried out, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, the replacement processing to write the data in another write area is not carried out, said recording medium storing file type information ~~for discrimination between said first and second processing modes in said recording medium as file management information associated with said file~~, said method comprising the steps of:

judging without using said file type information whether or not said file to be processed is read in said second processing mode, the file type information being used for identifying a processing mode between said first processing mode and said second processing mode in said recording medium as file management information associated with said file;

when judging by said judgment step that said file to be processed is read,
reading the data in said second processing mode; and

when judging by said judgment step that said file to be processed is read,
reading the data in said second processing mode; and

when judging by said judgment step that said file to be processed is not read,
reading the data in said first processing mode.

9. (currently amended) A file management apparatus having a first
processing mode wherein upon occurrence of a write error for a file data to be
written on a recording medium, replacement processing to write the data in another
write area is carried out, and having a second processing mode wherein upon
occurrence of a write error for a file data to be written on the recording medium,
replacement processing to write the data in another write area is not carried out, said
recording medium storing file type information ~~for discrimination between said first
and second processing modes as file management information associated with said
file~~, said apparatus comprising:

means for reading a file type information associated with a file to be
processed from the recording medium, the file type information being used for
identifying a processing mode between said first processing mode and said second
processing mode as file management information associated with said file;

means for converting said file type from the file type indicative of said first
processing mode to a file type indicative of said second processing mode; and

means for writing the file type after conversion in the recording medium as file management information associated with said file to be processed.

10. (previously presented) A file management apparatus as set forth in claim 9, wherein said replacement processing is carried out on an ECC block basis, said block as a recording unit including N (N: positive integer) sectors, and further comprising:

means for judging whether or not in all the N sectors of said ECC blocks that store data belonging to the file, are occupied; and

when said judging means judges that the data is not stored in the all N sectors of the ECC blocks, means for registering one of the remaining sectors in the ECC block in which the data of the file to be processed is not stored as stuffing in said file management information.

11. (previously presented) A file management apparatus as set forth in claim 10, further comprising:

means for judging whether or not data (referred to as other data) belonging to a file other than said file to be processed is stored in said remaining sector;

when said judging means judges that the other data is stored in the remaining sector, means for moving said other data to another ECC block; and

means for reflecting a result of said movement in file management information.

12. (previously presented) A file management apparatus as set forth in claim 10, further comprising:

means for judging whether or not data belonging to a file other than said file to be processed is stored in said remaining sector;

when said judging means judges that the data is stored in said remaining sector, means for moving the data belonging to said file to be processed to an ECC block different from said ECC block; and

means for reflecting a result of said movement in the file management information.

13. (original) A file management apparatus as set forth in claim 11, wherein said means for reflecting the result of said movement includes:

means for deleting first data allocation information indicative of a data storage location on the recording medium prior to said movement in said file management information; and

means for registering second data allocation information indicative of a data storage location on the recording medium after said movement in said file management information.

14. (previously presented) A file management apparatus as set forth in claim 9, further comprising means for setting a flag for inhibiting relocation of the file to be processed in said management information.

15. (previously presented) A file management apparatus according to claim 9 comprising:

means for reading data stored at another write area by said replacement processing; and

means for writing said data in an original recording area where the data would have been written without said replacement processing, wherein said replacement processing and the reading and the writing are carried out on a basis of an ECC block including N recording units (N: positive integer) termed as sectors.

16. (currently amended) A file management apparatus having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to write the data in another write area is carried out, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to write the data in another write area is not carried out, said recording medium storing file type information ~~for discrimination between said first and second processing modes in said recording medium as file management information associated with said file~~, said apparatus comprising:

means for judging without using said file type information whether or not said file to be processed is read in said second processing mode, the file type information being used for identifying a processing mode between said first processing mode and said second processing mode in said recording medium as file management information associated with said file;

when said judging means judges that said file to be processed is read, means for reading the data in said second processing mode; and

when said judging means judges that said file to be processed is not read, means for reading the data in said first processing mode.

17. (currently amended) A program having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to write the data in another write area is carried out, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to write the data in another write area is not carried out, said recording medium storing file type information ~~for distinction between said first and second processing modes as file management information associated with said file~~, said program for causing a computer to execute the steps:

reading a file type information associated with a file to be processed from the recording medium, the file type information being used for identifying a processing

mode between said first processing mode and said second processing mode as file management information associated with said file;

converting said file type information indicative of said first processing mode to a file type information indicative of said second processing mode; and

writing the converted file type information in the recording medium as the file management information associated with said file to be processed.

18. (previously presented) A program as set forth in claim 17, wherein said replacement processing is carried out on an ECC block basis, said block as a recording unit including N (N: positive integer) sectors, said program for causing a computer to execute the steps of:

judging whether or not all the N sectors of said ECC blocks that store data belonging to the file, are occupied; and

when said judging step judges that the data is not stored in the all N sectors of the ECC blocks, registering one of the remaining sectors in which the data of the file to be processed is not stored as a stuffing in said file management information.

19. (previously presented) A program as set forth in claim 18, further for causing a computer to execute the steps of:

judging whether or not data (referred to as other data) belonging to a file other than said file to be processed is stored in said remaining sector;

when said judging step judges that the other data is stored in the remaining sector, moving said other data to another ECC block; and reflecting a result of said movement in file management information.

20. (original) A program as set forth in claim 18 for causing a computer to execute further steps of:

judging whether or not data belonging to a file other than said file to be processed is sorted in said remaining sector;
when said judging step judges that the data is stored in said remaining sector, moving the data belonging to said file to be processed to an ECC block different from said ECC block; and
reflecting a result of said movement in the file management information.

21. (original) A program as set forth in claim 19 for causing a computer to execute said step of reflecting the result of said movement further including:

deleting said first data allocation information indicative of a data storage on the recording medium prior to said movement in said file management information;
and

registering second data allocation information indicative of a data storage location on the recording medium after said movement in said file management information.

22. (previously presented) A program as set forth in claim 17, for causing a computer to execute further a step of setting a flag for inhibiting relocation of the file to be processed in said management information.

23. (previously presented) A program according to claim 17 said program for causing a computer to execute the steps of:

reading data stored at another write area by said replacement processing;
and

writing said data in an original recording area where the data would have been written without said replacement processing wherein said replacement processing and the reading step and the writing step are carried out on a basis of an ECC block including N recording units (N: positive integer) termed as sectors.

24. (currently amended) A program having a first processing mode wherein, when data in the form of a file is written on a recording medium and a write error occurs, replacement processing to write the data in another write area is carried out, and having a second processing mode wherein, when the write error occurs, the replacement processing to write the data in the other write area is not carried out, for storing a file type ~~for distinction between said first and second processing modes in said recording medium as file management information associated with said file~~, said program for causing a computer to execute the steps of:

judging without using said file type whether or not said file to be processed is read in said second processing mode, the file type being used for identifying a processing mode between said first processing mode and said second processing mode in said recording medium as file management information associated with said file;

when said judging step judges that said file to be processed is read, reading the data in said second processing mode; and

when said judging step judges that said file to be processed is not read, reading the data in said first processing mode.

25. (currently amended) A file management method having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium, replacement processing to write the data in another write area is carried out, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to write the data in another write area is not carried out, said recording medium storing file type information ~~for discrimination between said first and second processing modes in said recording medium as file management information associated with said file~~, said method comprising the steps of:

regarding the file type information of a file to be processed as said second processing mode regardless of said file type information and reading the data in said second processing mode, the file type information being used for identifying a

processing mode between said first processing mode and said second processing mode in said recording medium as file management information associated with said file.

26. (currently amended) A file management apparatus having a first processing mode wherein upon occurrence of a write error for a file to be written on a recording medium, replacement processing to write the data in another write area is carried out, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to write the data in another write area is not carried out, said recording medium storing file type information ~~for discrimination between said first and second processing modes in said recording medium as file management information associated with said file~~, said apparatus comprising:

means for regarding the file type information of a file to be processed as said second processing mode regardless of said file type information and reading the data in said second processing mode, the file type information being used for identifying a processing mode between said first processing mode and said second processing mode in said recording medium as file management information associated with said file.

27. (currently amended) A program having a first processing mode wherein upon occurrence of a write error for a file data to be written on a recording medium,

replacement processing to write the data in another write area is carried out, and having a second processing mode wherein upon occurrence of a write error for a file data to be written on the recording medium, replacement processing to write the data in another write area is not carried out, said recording medium storing file type information ~~for discrimination between said first and second processing modes in said recording medium as file management information associated with said file, said program for causing a computer to execute the step of:~~

regarding the file type information of a file to be processed as said second processing mode regardless of said file type information and reading the data in said second processing mode, the file type information being used for identifying a processing mode between said first processing mode and said second processing mode in said recording medium as file management information associated with said file.

28. (previously presented) A file management method for managing data stored in a recording medium in a file form, the method comprising the steps of:

recording information on a file type of the data in the recording medium, the file type in the data being both of a first file type associated with a first processing mode in which a data reading operation stops in response to an error in the data and a second file type associated with a second processing mode in which a data reading operation is kept continued regardless of an error in the data;

reading the information on the file type of the data to be processed from the recording medium, the file type information being used for identifying a processing mode between said first processing mode and said second processing mode;

converting the first file type of the data read from the recording medium to the second file type in response to existence of a part of the first file type;

writing the converted second file type into the recording medium; and

reading out the data, a file type of which is the second file type, from the recording medium.

29. (previously presented) The file management method of claim 28 further comprising the steps of:

replacing a part of the data in the first file type in the recording medium on an ECC blocks basis in case that the reading operation stops, the block including N-recording units termed as sectors (N: positive integer);

judging whether or not all the N sectors of the ECC blocks are occupied; and
registering, in the information on the file type recorded in the recording medium, a remaining sector as a stuffing when the all the N sectors of the ECC blocks are occupied.